

SEQUENCE LISTING

<110> Merck & Co., Inc.
Jansen, Kathrin U.
Schultz, Loren D.
Neeper, Michael P.
Markus, Henry Z.

<120> OPTIMIZED EXPRESSION OF HPV 31 L1 IN
YEAST

<130> 21188-PCT

<150> 60/457,172

<151> 2003-03-24

<160> 8

<170> FastSEQ for Windows Version 4.0

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<211> 1515

<212> DNA

<213> HPV31 L1 wild-type

<400> 1

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<212> DNA

<213> Artificial Sequence

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<223> 31 partial rebuild

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<212> DNA

<213> Artificial Sequence

<220>

<223> 31 total rebuild

<400> 3

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tgggcttgtg	tcggttttgga	agtcggtaga	ggccaaccat	tgggtgtcgg	tatctctggt	360
caccattgt	tgaacaagtt	cgacgacacc	gaaaactcta	acagatacgc	tggtgggtcca	420
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1515

<210> 4

<211> 504

<212> PRT

<213> Artificial Sequence

<220>

<223> HPV 31 L1

<400> 4

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35      40      45
Tyr Tyr Ser Ile Pro Lys Ser Asp Asn Pro Lys Lys Ile Val Val Pro
50      55      60
Lys Val Ser Gly Leu Gln Tyr Arg Val Phe Arg Val Arg Leu Pro Asp
65      70      75      80
Pro Asn Lys Phe Gly Phe Pro Asp Thr Ser Phe Tyr Asn Pro Glu Thr
85      90      95
Gln Arg Leu Val Trp Ala Cys Val Gly Leu Glu Val Gly Arg Gly Gln
100      105      110
Pro Leu Gly Val Gly Ile Ser Gly His Pro Leu Leu Asn Lys Phe Asp
115      120      125
Asp Thr Glu Asn Ser Asn Arg Tyr Ala Gly Gly Pro Gly Thr Asp Asn
130      135      140
Arg Glu Cys Ile Ser Met Asp Tyr Lys Gln Thr Gln Leu Cys Leu Leu
145      150      155      160
Gly Cys Lys Pro Pro Ile Gly Glu His Trp Gly Lys Gly Ser Pro Cys
165      170      175
Ser Asn Asn Ala Ile Thr Pro Gly Asp Cys Pro Pro Leu Glu Leu Lys
180      185      190
Asn Ser Val Ile Gln Asp Gly Asp Met Val Asp Thr Gly Phe Gly Ala
195      200      205
Met Asp Phe Thr Ala Leu Gln Asp Thr Lys Ser Asn Val Pro Leu Asp
210      215      220
Ile Cys Asn Ser Ile Cys Lys Tyr Pro Asp Tyr Leu Lys Met Val Ala
225      230      235      240
Glu Pro Tyr Gly Asp Thr Leu Phe Phe Tyr Leu Arg Arg Glu Gln Met
245      250      255
Phe Val Arg His Phe Phe Asn Arg Ser Gly Thr Val Gly Glu Ser Val
260      265      270
Pro Thr Asp Leu Tyr Ile Lys Gly Ser Gly Ser Thr Ala Thr Leu Ala
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340      345      350
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355      360      365
Glu Glu Phe Asp Leu Gln Phe Ile Phe Gln Leu Cys Lys Ile Thr Leu
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Ser Ala Asp Ile Met Thr Tyr Ile His Ser Met Asn Pro Ala Ile Leu
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